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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/524,976

11/02/2005

Mark Green

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EXAMINER

KOSLOW, CAROL M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

01/03/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/524,976

**Applicant(s)**

GREEN ET AL.

**Examiner**

C. Melissa Koslow

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 22-26 and 28 is/are rejected.
- 7) ☒ Claim(s) 19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/05, 11/05
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_

The information disclosure statement filed 2 November 2005 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the titles of the cited articles are missing. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

These articles will be considered once the citations on the PTO-1449 meet the requirements of 37 CFR 1.97.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the subject matter of claim 11.

While page 4, lines 10-15 teaches the number of oxygen atoms exceeds 10 and is typically 15 to 50, this teachings does not provide proper antecedent basis for the claimed number of oxygen atoms of at least 15.

Claim 1 is objected to because of the following informalities: This claim teaches M is at least one metal of group VA or VIA. Since there are three art accepted periodic tables and one calls the metals in claim 4 as Group VB and VIB and another terms these metals as Group VA and VIA, it is suggested applicants amend this claim so the desired metals are claimed. This will prevent any confusion as to the definition of M. Appropriate correction is required.

Claim 28 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim or rewrite the claim in independent form.

This claim defines the intended uses of claimed particles and thus does not further limit the particle itself. The intended use of a material does not further define the material itself.

If applicants rewrite this claim in independent form, it will be held as non-elected by original presentation.

Claims 22 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Page 4, line 21 through page 5, line 6 teach the particles are formed by mixing a water soluble source of  $M^2$  with a water soluble salt of POM in water or an aqueous solution, adding an acid heating the mixture and then adding a water soluble salt of  $M^1$ . These lines also teach the cation for the water soluble salt of POM should be  $M^2$ . Claim 25 teaches the mixture is heated before the acid is added which contradicts that taught in the specification. Claim 23 teaches all the salts are of  $M^2$ , which is different from that taught in the specification since there is no indication in the specification that the  $M^1$  salt can also contain  $M^2$ . These discrepancies need to be clarified.

Claims 23 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 is indefinite since it does not further limit claim 1. Claim 23 is indefinite since it is unclear what is meant by "the salts are all of  $M^2$ ". The specification teaches the POM salt can have  $M^2$  as a cation, but there is no indication in the specification that the  $M^1$  salt can also contain  $M^2$ .

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9, 11-18, 22, 24, 25, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent 3,881,941.

This reference teaches luminescent europium activated alkali metal polytungstate particles, where the alkali metal can be sodium, which falls within the formula of claims 1-5, 9, 11 and 14-16. The particles are used in security marking/labeling/identification. Column 3, lines 1-16 teach producing the particle by mixing ammonium paratungstate and sodium hydroxide in water, boiling this mixture, adding an acid, such as acetic acid and then adding a water soluble europium salt. This is the claimed process and therefore one of ordinary skill in the art would expect the resulting particles to have a quantum efficiency and particle size that falls within the claimed ranges, absent any showing to the contrary. Claim 28 defines the intended use of the

particles and the intended use does not patentably distinguish the claimed particles from that taught. The reference teaches the claimed particles and method.

Claims 1-18, 22, 24-26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by the article by Stillman et al.

This article teaches luminescent particles of trivalent rare earth ion activated sodium polyoxotungstate and europium activated potassium polyoxotungstosilicate. The rare earth ions are Eu, Pr, Nd and Ho. These formulas fall within those of claims 1-11 and 14-16. Claim 28 defines the intended use of the particles and the intended use does not patentably distinguish the claimed particles from that taught. The article states the particles are produce by the process in Peacock and Weakley, J. Chem. Soc. (A), 1971, which is to dissolve a polyoxotungstosilicate salt and a potassium salt in water, heating the mixture, adding acetic acid and a water soluble salt of europium. This is the claimed process and therefore one of ordinary skill in the art would expect the resulting particles to have a quantum efficiency and particle size that falls within the claimed ranges, absent any showing to the contrary. The reference teaches the claimed particles and method.

Claims 1-11, 14-16 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 04-189,892.

The abstract for this reference and the formulas on page 722 teaches luminescent particles having a formula that falls within those of claims 1-11 and 14-16. these particles are used in electroluminescent displays. Claim 28 defines the intended use of the particles and the intended use does not patentably distinguish the claimed particles from that taught. The reference teaches the claimed particles.

Claims 1-5, 9, 11-18, 22-24 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by the article by Sugeta et al.

This article teaches luminescent particles of trivalent europium activated sodium polyoxotungstate. This formulas fall within those of claims 1-5, 9, 11 and 14-16. Claim 28 defines the intended use of the particles and the intended use does not patentably distinguish the claimed particles from that taught. The process is dissolving a waters soluble sodium tungstate in water, adding acetic acid and then adding a water soluble europium salt. This is the claimed process and therefore one of ordinary skill in the art would expect the resulting particles to have a quantum efficiency and particle size that falls within the claimed ranges, absent any showing to the contrary. The reference teaches the claimed particles and method.

Claims 1-5, 9, 11, 14-16 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by the article by Yamase et al.

This articles teaches luminescent europium doped sodium polyoxotungstate particles used in electroluminescent displays. These particles fall within the formula of claims 1-5, 9, 11 and 14-16. . Claim 28 defines the intended use of the particles and the intended use does not patentably distinguish the claimed particles from that taught. The reference teaches the claimed particles.

Claims 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

There is no teaching or suggestion in the cited art of record of the claimed particles having a coating applicable for biotagging, such as silica.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cmk  
January 2, 2008

  
C. Melissa Koslow  
Primary Examiner  
Art Unit 1793